

CLAIMS

What is claimed is:

1. An isolated functional protein capable of interacting with the cytoplasmic domain of CD40 and/or other receptors of the TNF receptor superfamily such as CD30 and TNF receptor II wherein the protein has no homology to TRAF-proteins.
2. An isolated functional protein according to claim 1 comprising an amino acid sequence with 70-100% homology to the amino acid sequence depicted in SEQ ID NO:2.
3. An isolated functional protein according to claim 1 comprising an amino acid sequence with 70-100% homology to the amino acid sequence depicted in SEQ ID NO:4.
4. An isolated functional protein according to claim 1 comprising an amino acid sequence with 70-100% homology to the amino acid sequence depicted in SEQ ID NO:6.
5. An isolated functional protein according to claim 1 comprising an amino acid sequence with 70-100% homology to the amino acids 54-362 of SEQ ID NO:2.
6. An isolated functional protein according to claim 5 comprising an amino acid sequence with 70-100% homology to the amino acids 274-362 of SEQ ID NO:2.
7. An isolated functional protein according to claim 1 comprising an amino acid sequence with 70-100% homology to the amino acids 2-245 of SEQ ID NO:6.

8. An isolated nucleic acid sequence encoding a protein, said protein characterized by an ability to form a complex with receptors of the Tumor Necrosis Factor ("TNF") superfamily including the cytoplasmic domain of CD40 as determined by a yeast two-hybrid interaction assay or a co-immunoprecipitation assay, said protein comprising amino acids 54-140 of SEQ ID NO:2 or a fragment thereof of at least 10 consecutive amino acids in length and which is able to form said complex.

9. The isolated nucleic acid sequence of claim 8 with 70-100% homology to the DNA sequence depicted in SEQ ID NO:1.

10. The isolated nucleic acid sequence of claim 8 with 70-100% homology to the DNA sequence depicted in SEQ ID NO:3.

11. The isolated nucleic acid sequence of claim 8 with 70-100% homology to the DNA sequence depicted in SEQ ID NO:5.

12. Use of an isolated functional protein and/or a functional fragment thereof according to any of the claims 1-7 as a medicament.

13. Use of an isolated functional protein according to any of the claims 1-7 and/or a functional fragment thereof to treat TRAF-related, CD40-related, NF- κ B related and/or Jun (kinase)-related diseases.

14. The use according to claim 13 in which the disease is atherosclerosis, arthritis, multiple sclerosis, systemic lupus erythematosus and/or graft rejection.

15. The use of an isolated functional protein according to any of the claims 1-7 and/or a functional fragment thereof to sensitize tumor cells to anti-tumor treatments.

16. The use of an isolated functional protein according to any of the claims 1-7 and/or a functional fragment thereof to screen for compounds that interfere with the interaction of said protein(s) with other protein components of the TRAF, CD40 or NF- κ B related pathway.

17. A method for screening compounds comprising the use of a protein according to claim 16.

18. A compound isolated with the method according to claim 17.

19. A pharmaceutical composition comprising one or more isolated functional proteins according to any of the claims 1-7 and/or functional fragments thereof and a pharmaceutical acceptable carrier material.

20. A pharmaceutical composition comprising one or more compounds according to claim 18 and a pharmaceutical acceptable carrier material.

21. Use of a protein according to any of the claims 1-7 and/or functional fragments thereof for the manufacture of a pharmaceutical composition to treat TRAF, CD40 and/or NF- κ B related diseases.

22. The isolated nucleic acid sequence of claim 8 encoding a protein comprising amino acids 54-362 of SEQ ID NO:2.

23. The isolated nucleic acid sequence of claim 8 encoding a protein comprising amino acids 54-273 of SEQ ID NO:2.

24. The isolated nucleic acid of claim 8 encoding a protein comprising amino acids 54-236 of SEQ ID NO:2.